

Verification of Social Network Site Use Behavior of the University Physical Education Students

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This study aims to explore the relationships among performance expectancy, effort expectancy, social influence, facilitating condition, behavioral intention and use behavior of university physical education students in Taiwan. Moreover, it also intends to examine the moderating effects of gender, age, and experience on the UTAUT model. The targets were 19 universities in Taiwan by purposive sampling. A total of 760 questionnaires were distributed and 707 were returned, with a returning rate of 93%. The data were analyzed using SPSS 20.0 and Warp PLS 5.0. The results showed that on the UTAUT model, performance expectancy, social influence, and facilitating condition variables are positively related to behavioral intention; behavioral intention is positively related to use behavior; gender, age, and experiences played a moderating role on the model. The empirical results can provide useful reference regarding the explanatory power of the UTAUT model on university physical education students' usage intention toward social network sites.

Keywords: Unified Theory of Acceptance and Use of Technology, social network sites, physical education, moderator variable

INTRODUCTION

With Facebook as an example, Hsing et al. (2013) found that there were 0.97 billion Facebook users by the end of April 2013. As defined by Facebook, the active users are those who have logged in over the past 30 days. Facebook attracts its users with constantly innovated functions, and provides interactive channels. The open

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functions of Facebook include: status, graffiti wall, market, activity, gift, poke, applications on the open platform, Facebook video, etc. (Tsai et al., 2011). Hew (2001) reviewed existing literature on the Facebook use of the students and teachers, and found that there are 9 categories of the motivations to Facebook use: (1) to maintain the existing relationships; (2) to make new friends; (3) to feel it is cool to use Facebook; (4) to make themselves popular; (5) to doodle; (6) to show themselves; (7) to learn; (8) to use it as an item management tool; (9) to use it for the student activities. Therefore, besides entertainment and expanding interpersonal relationships, the functions of the social network sites (SNSs) can also attract companies and politicians as a channel to reach out to the intended targets. SNS is a kind of platform where the communication, information and entertainment can be satisfied (Chen, 2012).

SNSs are important activities in modern life, as they provide entertainment for the users and allow them to maintain or expand their interpersonal relationships. Understanding the SNS usage behaviors of university physical education students can be conducive for teachers and coaches to manage the classes or the sports teams, as well as establish good interactive relationship with the students and strengthen mutual trust. Some functions of SNSs can even promote learning effects and serve as assisted teaching platforms (Baris, 2015; Shieh, Liao, & Hu, 2013). Therefore, exploring the SNS usage behaviors of university physical education students is the motivation of this study.

Venkatesh, Morris, Davis, and Davis (2003) proposed the Unified Theory of Acceptance and Use of Technology (UTAUT) model after integrating 8 technology acceptance models, namely Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), Motivational Model (MM), Combined TAM and TPB (C-TAM-TPB), and Social Cognitive Theory (SCT). Under the UTAUT model, the four independent variables are the performance expectancy (PE), the effort expectancy (EE), the social influence (SI) and the facilitating conditions (FC). The four variables can influence the users' behavior intention and use behavior. Four other variables, namely gender, age, experience and voluntariness, play the moderating role. Venkatesh et al. (2003) explained the relevant variables under their model as follows:

1. PE: it means that the users use the information system can also help the workers to achieve the target and performance set in advance, and effectively helping them get the awarded marks on the job performance.

State of the literature

- People using social network site has become one of global phenomena in recent years. Social network sites (SNSs) attracts its users with constantly innovated functions, and provides interactive channels. Many social network site (SNS) studies have been reported in the literature.
- UTAUT model is a technology acceptance model. The theory holds that four key variables: performance expectancy, effort expectancy, social influence, and facilitating conditions; they could influence the users' behavior intention and use behavior. Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key variables on behavior intention and use behavior.
- UTAUT model in a longitudinal study found it can explained 70% of the variance in behavior intention and about 50% in actual use.

Contribution of this paper to the literature

- SNSs are important activities in modern life, as they provide entertainment for the users and allow them to maintain or expand their interpersonal relationships. Understanding the SNS usage behaviors of university physical education students can be conducive for teachers and coaches to manage the classes or the sports teams.
- The findings of this study indicate that the performance expectancy, social influence, and facilitating condition variables are positively related to behavioral intention, behavioral intention is positively related to use behavior, and gender, age, and experiences played a moderating role on the model.
- University teachers can consider carrying out interactive discussion with the students or facilitate group discussion using the SNS, thus increasing students' learning effect and course participation motivation.

2. EE: it refers to the cognition degree of the users on the system; for example, the users evaluate the system after using it.
3. SI: it means that people judge whether they influence the use degree of the system when they find that the important others appear.
4. FC: it refers to the use of the organization, technology and other relevant equipment on the system, as perceived by the individuals.

Hypothesis

On the basis of the UTAUT model, this paper proposes the following hypotheses:

The relationship between performance expectancy and behavior intention

Research evidence showed that when individuals use new technology, their high performance expectancy results in high perceived usefulness, and they tend to believe that technology or system will help them achieve the optimal performance (Compeau & Higgins, 1995). Venkatesh et al. (2003) argued that the consumer's assumption that a new information technology will bring about satisfactory performance tends to be positively correlated to the consumer's willingness to use the technology. Huang (2010) mentioned that the perceived usefulness in the performance expectancy exerted the most powerful influence on behavior. Moran (2006) found that the acceptable performance expectancy imposed positive impacts on the college students' usage intention in terms of tablets. In an investigation on the acceptance of Internet on the basis of technology acceptance model, Cheng, Lam, and Yeung (2006) found that perceived usefulness was positively correlated to usage intention. Lai, Huang, Lu, and Chang (2013) researched how the trust on websites, perceived usability and perceived usefulness would affect the tourists in their intention to book home stays (Minshuku), and found that perceived usefulness is the key factor. Therefore, expectancy performance is an important factor in the explanation of consumer's behavior intention according to UTAUT. Therefore, H1 is proposed: When the physical education students use SNSs, the influence of the performance expectancy on the behavior intention is significant and positive.

The relationship between effort expectancy and behavior intention

Effort expectancy refers to individual's perception of the system. For example, perceived ease of use does not require preparation (Davis, 1989). In other words, individuals can visualize themselves using the technology or system without difficulty (Rogers, 2003). Sun, Lou, Chao, and Wu (2008) pointed out that it is necessary for information systems or technologies to boast high friendliness, humanistic interfaces and learning guidance before they could be easily accepted by the users. Tsao, Shieh, and Jan (2009) indicated that consumers tend to compare a new technological service with the system or tool that they have used before when they are making decisions. Their usage intention toward the system would only be generated (which made them later to be actual users) when they found that the new system is easy to operate and does not require much learning. In brief, some studies have regarded perceived usability to be the decisive factor in terms of usage, which means that the learning required to use the new technology affects the acceptance and usage on the part of the users directly. Hence, H2 is proposed: When the physical education students use the SNSs, the influence of effort expectancy on the SNS behavior intention is significant and positive.

The relationship between social influence and behavior intention

Venkatesh et al. (2003) defined social influence as the influence that is imposed by the important figures around the users when they are using a system service. For example, in order to fit in with the friends who all shop online, the users would

accept the idea and shopped online too. Tsao, Shieh, and Jan (2009) found that the usage intention of the staff toward a property management system is affected by peer recommendations, the support of their supervisors or the company, and pressure from the proprietors. Huang, Lai, Chang, Lu, and Lai (2012) had similar research findings suggesting that baseball fans were more likely to use Facebook in order to interact with people with similar interests. Based on previous studies that showed positive relationship between social influence and behavioral intention. As a result, the following hypothesis H3 was formulated: When the physical education students use the SNSs, the influence of social influence on the SNS behavior intention is significant and positive.

The relationship among facilitating conditions, behavior intention and use behavior

Facilitating conditions refer to the circumstances when an individual believes that the existing organizations and technological structures could support the use of IT systems (Venkatesh et al., 2003). Ajzen (1991) pointed out that when the user believes that s/he has the capability to use the system or that s/he could obtain more resources from it, their usage intention and behavior would be stronger. Al-Khaldi and Wallace (1999) found that the more positive an individual's attitude toward computers, the more experience they have with PCs and the more familiar they are with the relevant equipment to PCs, the more intellectual workers tended to use PCs. Based on the above, the following hypotheses are proposed:

H4a: When the physical education students use the SNSs, the influence of the facilitating conditions on the SNS behavior intention is significant and positive.

H4b: When the physical education students use the SNSs, the influence of the facilitating conditions on the SNS use behavior is significant and positive

The relationship between behavior intention and use behavior

Taylor and Todd (1995) pointed out that usage intention belongs to attitudes and perceptions, while use behavior belongs to practical usage. When a user's usage intention toward a new system is high, the number and frequency of their practical use of the system would also be high. Some literature suggests that usage intention is the antecedent of use behavior (Ajzen, 2002; Kim, Malhotra, & Narasimhan, 2005). Through the predictions via TAM, Turner, Kitchenham, Brereton, Charters, and Budgen (2010) found that the correlations between usage intention and use behavior are strong. In their positivistic study of the consumers' online purchase of air tickets based on the UTAUT2 model, Escobar-Rodríguez and Carvajal-Trujillo (2013) found that usage intention is the most powerful influence in predicting the use behavior of purchasing air tickets online. Hence, H5 is proposed: The influence of the SNS behavior intention of the physical education students on the use behavior is significant and positive.

Gender, age, experience and voluntariness play the moderating role

Venkatesh et al. (2003) proposed that: (1) individual performance expectancy on the system use can vary because of gender and age; the female users and the seniors pay more attention to the performance expectancy on the system use, but the influence changes with the accumulation of use experience; (2) individual effort expectancy on the information system use can vary because of gender and age; the female users and the seniors pay more attention to the effort expectancy on the information system use, but the influence changes with the accumulation of the use experience; (3) gender, age, experience and voluntariness play the moderating role in the influence relationship of the social influence on the behavior intention. When the users have a higher intention to use the new system, then the frequency of their use on the new system will be higher; (4) age and experience play the moderating

role in the influence relationship of the facilitating conditions on the use behavior. When the users are the senior workers, as the users' experience of increases, the influence of the facilitating factors will also increase. Based on prior studies, the researcher formulated the following hypotheses:

H6: The gender of the physical education students plays a moderating role in the relationship between the performance expectancy and the SNS usage intention.

H7: The gender of the physical education students does not play a moderating role in the relationship between the effort expectancy and the SNS usage intention.

H8: The gender of the physical education students plays a moderating role in the relationship of the social influence and the SNS usage intention.

H9a: The SNS usage experience of the physical education students has a moderating role in the relationship between the facilitating conditions and the SNS usage intention.

H9b: The SNS usage experience of the physical education students has a moderating role in the relationship between the facilitating conditions and the SNS usage behavior.

This study aims to apply the UTAUT model in an empirical research on the SNS usage behavior of university physical education students, to explore the relationships among the variables of performance expectancy, effort expectancy, social influence, facilitating conditions, behavior intention, and use behavior. It also intends to find out whether the variables of gender, age and experience play a moderating role in the UTAUT model.

METHOD

Participants

Among the universities that have physical education departments in Taiwan, this study selected the physical education departments in Taiwan Normal University and University of Physical Education, as well as those in universities with emphasis on physical education, totaling 19 universities. By stratified quota sampling method, 10 students (5 male students and 5 female students) were respectively selected from each year level. A total of 760 questionnaires were distributed. In order to increase the returning rate, the researcher invited one teacher from each school to be the coordinator. The teachers were asked to explain the research purpose to the students in advance. The students' consents were obtained before the survey. A total of 707 valid samples were retrieved, with a valid return rate of 93%.

Measurement

The questionnaire content was modified from Venkatesh et al. (2003). The first part of the UTAUT scale includes the dimensions of PE, EE, SI, FC, BI and UB, and there were 26 items. The dimension of PE refers to that the university students can quickly and effectively identify features and get things done when using the social network sites. The dimension of EE means students perception of complexity and usability of the social network sites. The dimension of SI refers to students perception of whether their important others should use the social network sites. The dimension of FC refers to students' perception of accessible resources around them and of whether resources help them manage social network sites and complete tasks at hand. The dimension of BI refers to students' acceptance of social network site and their willingness to use such site in the future. The dimension of UB refers to use of social network sites by students last week (including Line, Skype, Yahoo messenger, and Facebook). The items were measured with a Likert 5-point scale, ranging from "strongly agree" to "strongly disagree". The demographic data include gender, age and individual experience in the use of SNSs.

Data analysis

This study used partial least squares (PLS) to analyze the 9 research hypotheses. PLS is commonly used in empirical studies on UTAUT model (Bock, Zmud, Kim, & Lee, 2005; Venkatesh et al., 2003). Its function is similar to the Structural Equation Modeling (SEM) that it can simultaneously measure the correlation between the constructs and the constructs in the model, and analyze the reliability and validity of every construct (Chin, 1998). This study used the Warp PLS 5.0 statistical software developed by Kock (2015).

RESULTS

Background variables of the respondents

In the aspect of gender, there are 375 (53%) male and 332 (47%) female students. In terms of age, 96 (13.6%) are 18 years old, 151 (21.4%) are 19 years old, 199 (28.1%) are 20 years old, 154 (21.8%) are 21 years old. 87 (12.3%) are 22 years old, and 20 (2.7%) are 23 years old or above. In terms of SNS usage, 6 (3.8%) have less than 3 months of experience, 13 (1.8%) have 4 and 6 months of experience, 7 (1%) people have 7 and 12 months of experience, 63 (8.9%) have 1 and 2 years of experience, 137 (19.4%) have 2 and 3 years of experience, and 314 (44.4%) have over 4 years of experience.

Reliability and validity verification of the measures

According to the previous suggestions (Fornell & Larcker, 1981), the Cronbach's α should be equal to or over .70 to indicate good reliability. When the composite reliability value of the potential variables (i.e., various research dimensions) is over .70, it indicates that all the variables observed within the potential variables have the internal consistency reliability because its numerical calculation is estimated by the standardized loading and the measuring error of the variables observed on the potential variables. The composite reliability value and Cronbach's α value of various variables and the analysis results in the model of this study conform to the verification standard according to the composite reliability value and Cronbach's α value of various variables over .70, as shown in Table 1. This indicates that the reliability of the measurement model in this study reaches the acceptable level.

Convergent validity

Convergent validity is to determine whether the value of the factor loading of the measured variables on the potential variables is large enough. According to Hair,

Black, Babin and Anderson (2010), the factor loading should be over .50. If it does not reach .50, the item should be removed. The verification results of this study indicate that the factor loading of the measured variables for the performance

Table 1. Reliability analysis

Dimensions	Composite reliability	Cronbach's α value
Performance expectancy	.863	.787
Effort expectancy	.906	.862
Social influence	.811	.718
Facilitating condition	.821	.719
Behavioral intention	.889	.833
Use behavior	1.00	1.00

Table 2. PLS loading and cross loading

Variables	PE	EE	SI	FC	BI
PE1	.811				
PE2	.745				
PE3	.835				
PE4	.734				
EE1		.806			
EE2		.840			
EE3		.875			
EE4		.844			
SI1			.730		
SI2			.665		
SI3			.809		
SI4			.671		
FC1				.692	
FC2				.759	
FC3				.810	
FC4				.655	
BI1					.794
BI2					.835
BI3					.835
BI4					.800

Note: PE: performance expectancy; EE: effort expectancy; SI: social influence; FC: facilitating conditions; BI: behavioral intention; UB: use behavior.

expectancy factor is between.734 and.835; that for the effort expectancy factor is between.806 and.875; that for the social influence factor is between.671 and.809; that for the facilitating condition factor is between.655 and.810; that for the behavioral intention factor is between.794 and.835 (see table 2); all the factor loading values are more than.50 and they conform to the suggested standard. Therefore, the variables in this study have good convergent validity.

Discriminant validity

As proposed by Chin (1998), the square root of the average variances extracted (AVE) from the individual dimension should be more than the covariant relationship between this dimension and the other dimensions in the model, in order to verify discriminant validity. Venkatesh, Thong and Xu (2012) suggested that the examination standard for AVE (the square root) should at least be more than or equal to.70, as shown in Table 3. As seen, the AVE square roots of all the dimensions in the model of this study are over the associated coefficient values in the same row or the same column, and both of them are over.70, which conform to the standard. Hence, the measurement model in this study has a good discriminant validity.

The structural model and hypothesis testing

This study proposed 8 research hypotheses. Warp PLS 5.0 was used to verify the structural model. The structural equation modeling (path analysis) and results are shown in Figure 1. Hwang (2004) indicated that the path coefficient represents the strength and direction of the relationships between the research variables. The verification of the path coefficient should be significant and consistent with the expected direction of the research hypotheses, so as to establish the relationship between the independent variables and the dependent variables. The analysis results suggest that:

H1: When the physical education students use SNSs, the influence of the performance expectancy on the behavior intention is significant and positive ($\beta=.33$, $p<.05$). This indicates that when the performance expectancy is high, the SNS behavior intention is also high.

H2: When the physical education students use the SNSs, the effort expectancy does not have a significant influence on the SNS behavior intention ($\beta=.01$, $p>.05$); thus, this hypothesis is not supported.

H3: When the physical education students use the SNSs, the social influence does not have a significant influence on the SNS behavior intention ($\beta=.18$, $p>.05$), which indicates that when the social influence is high, the SNS behavior intention is also high.

Table 3. Discriminant validity of constructs

	PE	EE	SI	FC	BI
PE	.782	.568	.607	.557	.591
EE	.568	.841	.517	.567	.403
SI	.607	.517	.721	.606	.522
FC	.557	.567	.606	.731	.562
BI	.591	.403	.522	.562	.816

Note: PE: Performance expectancy, EE: effort expectancy, SI: social influence, FC: BI: behavioral.

Diagonals represent the average variance extracted (the square root of the average variance extracted in the parentheses) while the other entries represent the correlations

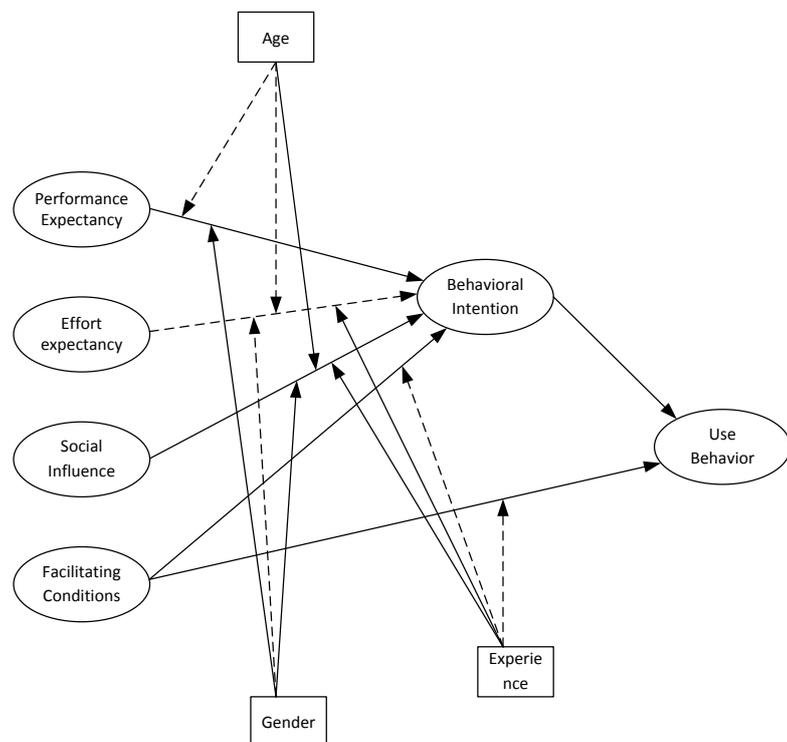


Figure 1. SEM results of the standardized model parameter estimation

Note: “-” represent “path coefficient was not significant” “-” represent “path coefficient was significant”

H4a: When the physical education students use the SNSs, the influence of the facilitating conditions on the SNS behavior intention is significant and positive ($\beta=.28, p<.05$). This suggests that when the facilitating conditions are high, the SNS behavior intention is also high. H4b: When the physical education students use the SNSs, the influence of the facilitating conditions on the SNS use behavior is significant and positive ($\beta=.15, p<.05$). This indicates that when the facilitating conditions are high, the SNS use behavior is also high.

H5: The influence of the SNS behavior intention of the physical education students on the use behavior is significant and positive ($\beta=.25, p<.05$). This suggests that when the SNS behavior intention of the physical education students is high, the SNS use behavior is also high.

H6: The gender of the physical education students plays a significant and negative moderating role in the relationship between the performance expectancy and the SNS behavior intention ($\beta=-.11, p<.05$). This suggests that male students' subject to a smaller influence on the relationship between the performance expectancy and the SNS behavior intention than the female students do. Age of the physical education students does not play a significant moderating role in the relationship between the performance expectancy and the SNS behavior intention ($\beta=.03, p>.05$). This hypothesis is not supported.

H7: Gender of the physical education students does not play a significant moderating role in the relationship between the effort expectancy and the SNS behavior intention ($\beta=-.04, p>.05$). This hypothesis is not supported. Age does not play a significant moderating role in the relationship between the effort expectancy and the SNS behavior intention ($\beta=.05, p>.05$). This hypothesis is not supported. The students' SNS usage experience plays a significant and negative moderating role in the relationship between the effort expectancy and the SNS behavior intention ($\beta=-.17, p<.05$). This suggests that when the students have more experience in using the SNSs, there is a smaller influence on the relationship between the effort expectancy and the SNS behavior intention.

H8: Gender of the physical education students plays a significant and negative moderating role in the relationship of the social influence and the SNS behavior intention ($\beta=-.13, p<.05$). This suggests that male students are subject to a smaller influence on the relationship between the social influence and the SNS behavior intention than the female students do. Age plays a significant and negative moderating role in the relationship between the social influence and the SNS behavior intention ($\beta=-.09, p<.05$). This indicates that for older students, there is a smaller influence on the relationship between the social influence and the SNS behavior intention. The SNS usage experience plays a significant and positive moderating role in the relationship between the social influence and the SNS behavior intention ($\beta=.16, p<.05$). This means that when the students have more experience in using the SNS, there is a greater influence on the relationship between the social influence and the SNS behavior intention.

H9a: The SNS usage experience of the physical education students does not have a significant moderating role in the relationship between the facilitating conditions and the SNS behavior intention ($\beta=.04, p>.05$). This hypothesis is not supported.

H9b: The SNS usage experience of the physical education students does not have a significant moderating role in the relationship between the facilitating conditions and the SNS use behavior ($\beta=-.02, p>.05$). This hypothesis is not supported.

Explanatory Power (R^2)

The explanatory power is also called R^2 . It is the percentage of the variation amount that the exogenous variables can explain on the endogenous variables so it represents the predictive ability of the research model. A high R^2 value indicates a stronger predictive ability (Hwang, 2004). According to the suggestions of Hair et al.

(2014), the R^2 values of .25, .50 and .75 respectively represent the weak, medium and strong explanatory power. According to Figure 1, the R^2 value is marked in the circle of behavior intention and usage behavior in the figure. The R^2 value of BI is .484, which belongs to the medium and above explanatory power; it represents that the variables of performance expectancy, effort expectancy, social influence and facilitating conditions can explain the variable of behavior intention to the degree of 48.4%. The R^2 value of use behavior is .135, belonging to the weak explanatory power, which represents that the variables of facilitating conditions, use habit and behavior intention can explain the variable of use behavior to the degree of 13.5%.

DISCUSSION

This study applied the UTAUT model proposed by Venkatesh et al. (2003) to verify the SNS usage of university physical education students. The results showed that the variables of performance expectancy, effort expectancy, social influence and facilitating conditions have a significant positive influence on the behavior intention. The predictive explanatory power is very strong, but the explanatory power on the variable of use behavior is low. These results are slightly different from the findings of Venkatesh et al. (2003). Lai et al. (2013) found that UTAUT model has better explanatory power on behavior intention, but a low explanatory power on use behavior. Thus, additional variables are needed for the UTAUT model to improve the explanatory power on the actual use behavior.

In the model, the variables of performance expectancy, social influence, facilitating conditions have a significant and positive influence on behavior intention; behavior intention also has a significant and positive influence on use behavior. The results indicated that performance expectancy has the greatest influence. Thus, if the SNS can rapidly and effectively provide the students with the suitable functions that they want, such as user-friendliness, finding friends and managing friend groups quickly, their SNS usage intention can be enhanced. Previous studies indicate that perceived usefulness is the main factor influencing behavior intention (Bertrand & Bouchard, 2008; Moran, 2006; Wang, 2013). When the SNSs can provide interaction between the people with the same interests and assist them to use the SNSs, the usage intention can be enhanced (Huang et al., 2012).

The model of this study suggested that effort expectancy does not have a significant influence on the SNS usage intention, which is different from Venkatesh et al. (2003). Effort expectancy means that the university physical education students should consider the complexity of the content and user-friendliness of SNSs in use. This factor does not have a significant influence because the proportion of the university students who use the SNSs is high and the current system design is user friendly. Thus, the most of the students are familiar with the system usage. Moreover, SNS usage experience has a significant and negative moderating role in the relationship between effort expectancy and the SNS usage intention. This suggests that when the students have more experiences in using SNSs, there is a smaller influence on the relationship between effort expectancy and the SNS usage intention.

The analysis on the moderating role of the variables of gender, age and experience on UTAUT model found that gender plays a significant and negative moderating role in the relationship between the performance expectancy and the SNS usage intention. This suggests that the male students are subject to a smaller influence on the relationship between the performance expectancy and the SNS usage intention than the female students do. This result is different from Venkatesh and Morris (2000) that the male students are subject to a greater influence relationship of the performance expectancy on the acceptance of behavior intention.

However, this finding is consistent with Mikkelsen (2002) that the female students are subject to a greater influence than the male students do. Therefore, gender plays a significant moderating role in the relationship between the performance expectancy and the SNS usage intention, which reminds the PE teachers at university level of this influential factor and how to adjust possible actions to prevent negative experiences.

This study found that the male students are subject to a smaller influence on the relationship between the social influence and the SNS usage intention, older students are subject to a smaller influence, and the student with more SNS usage experience are subject to a greater influence. This result is consistent with Venkatesh and Morris (2000), who studied the acceptance behavior of the employees in the financial organization on the internal information system in the new organization, and found that gender plays a significant moderating role in the relationships between the social influence and the SNS usage intention, namely the male students are subject to a smaller influence than the female students do. Venkatesh et al. (2003) found that older employees are subject to a greater influence. Thompson, Higgins, and Gibson (1994) studied the model of individuals using the computer, and found that the users with more personal computer use experience are subject to a greater influence.

This study suggests that the marketing and publicity of SNSs should focus on the convenience and advantages of the SNSs, such as free phone calls, free text messages, and multi-user chat. The students tend to use the SNSs more if they perceive the sites as a fashionable trend. As it is popular for university students to use SNS, the possibility of using SNSs to promote the interaction between the teachers and students in the teaching can be further explored. Schar and Krueger (2000) indicated that the use of visual and audio aids in teaching media can reduce the burdens of students in cognitive learning, attract students' attention, and enhance learning effectiveness. The use of text, pictures, sound, and pictures can create dynamic multimedia webpages, so that the users' learning motivation can be enhanced (Shen, 2008). University teachers can consider carrying out interactive discussion with the students or facilitate group discussion using the SNS, thus increasing students' learning effect and course participation motivation.

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